

**AASHTO NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM
SIGN SHEETING MATERIALS**

**GROTON, CT
MAY 9, 2005**

MINUTES

1. Chair Henry Lacinak called the meeting to order at 3:15 PM

ATTENDEES:

Panel Members:

Henry Lacinak – Chair	Louisiana DOTD
Wendy Ealding – Vice Chair	Virginia DOT
Dave Iverson	MNDOT
Philip Lancaster	FDOT
Terry Rawls	SC DOT
John Corcoran	NH DOT

Visitors (state, federal, academia):

Jason Davis	Louisiana DOTD
Xiao Qin	University of Wisconsin – Madison
Ned Schmitt	Wisconsin DOT
Charles Harlow	ConnDOT
Stuart Thompson	Utah LTAP
Orlando Picozzi	NYS DOT
Derrick Castle	KYTC
John Mark Clements	KYTC
John Smith	MS DOT
Jim Swisher	Virginia DOT
Dave Kuniega	PENNDOT
Karen Byram	FDOT
Scott Thorson	Nevada DOT
Mark Headley	Arkansas Highway Department
Don Wishon	GA DOT
Joseph Putherickal	IA DOT
John Bassett	TX DOT

Visitors (industry):

Matt Hills	Avery Dennison
Brook Jerzyk	Reflexite
Warren Ketola – Industry Rep	3M
James Hu	Nippon Carbide
Tom Lagnese	Avery Dennison

2. **MINUTES OF 2004 MEETING IN COLUMBUS, OH**

The minutes were reviewed and approved.

3. STATE AND INDUSTRY REPRESENTATION.

Chair Henry Lacinak updated the Project Panel about the proposal from the Administrative Task Force to change the structure of Project Panels to align with that of the AASHTO Subcommittee on Materials. This would allow unlimited state representation instead of the current ceiling of eight state Project Panel members. It would also allow an increase in the number of industry representatives from the current ceiling of two to 20% of the number of state representatives. The Project Panels would be renamed as Subcommittees.

In the past the Panel had two industry representatives, Warren Ketola and Ken Uding. Ken has retired and has not been replaced. Warren is currently serving as Industry Liaison.

4. STANDARD OPERATING PROCEDURES FOR SIGN SHEETING MATERIALS

Warren Ketola presented comments from industry. See Attachment 1 for more details.

Highlights of industry concerns were as follows:

Status of NC data – ongoing work is still being published even though deck has been discontinued for new material. The portable color data for fluorescent sheetings (and even some inked sheetings) indicates that the NC instrument does not measure daytime color appropriately. Industry would like to discontinue publication or have material tested elsewhere

Status of 1.0 degree OA testing that was proposed for all prismatic sheetings at the 2004 Columbus Meeting - needs follow up

Data review by Industry - needs to be timed consistently to avoid overload e.g. as soon as available, and need to define review period.

DataMine issues. Industry likes getting raw data but needs the commentary section that used to be published in hard copy reports. DataMine is not user friendly.

Dispute resolution process needed -Industry wants to be able to examine the panels.

State Comments

Jim Swisher handed out proposed enhancements to the work plan – see Attachment 2.

Wendy Ealding advised that Oscar Mousavi of ADOT has moved to another position within ADOT, and Ken Lane of MO DOT has retired. These are key testing states and the Panel needs to ensure continued participation.

5. DATAMINE TASK FORCE REPORT

This Task Force was charged with review of the DataMine system to recommend appropriate enhancements. Jason Davis is designated as Chair; other members are Jim Swisher, Warren Ketola, Chris Gaudette (Reflexite).

Commentary will be included in future reports per Jim Swisher – see Item 6

6. **WORK PLAN ENHANCEMENTS** presented by Jim Swisher

QC Program Proposal – see Attachment 2

Process to communicate out-of-ordinary events - see Attachment 2

Definition and process for handling an “out-of-ordinary” event – see Attachment 2

An example of “out-of-ordinary” events that occurred with the 2003 submittal is shown in Attachment 3

Testing log sent to testing states to be used to show how we are meeting performance standards – see Attachment 4

Round Robin results presented by Jim Swisher – see Attachment 5

An example of the proposed commentary for the DataMine is shown in Attachment 6

7. **OLD BUSINESS**

- 1.0° OA survey results – see Item 10 below for further discussion.
- Possible outdoor weathering at a test site in South Florida; item raised by industry in previous years – see Attachment 7

8. **NEW BUSINESS**

— ASTM liaison – Wendy Ealding, Chair of ASTM D04.38, provided an update on recent ASTM activities and their potential impact on the NTPEP Sign Sheeting Panel. See attachment 8 for details. In particular, there is a proposal currently in Main Committee Ballot that sets nighttime color requirements for sign sheeting. If this is adopted, NTPEP will need to decide if and how to perform this testing.

Higher observation angle testing (1.0° observation angle) – results of survey presented by Wendy Ealding – see Attachment 9. The results of the survey indicated that many (25/26 responses) states expressed interest in having sheeting tested at 1.0° observation angle. Wendy Ealding proposed that the additional testing should only be performed on prismatic materials, where there is the greatest need. Research at TTI and by others indicates that the 0.5° and 1.0° observation angles cover the range of legibility distances depending on the vehicle. While the retroreflectivity values at 0.2° observation angle for glass-beaded sheeting are predictive of performance in the 0.5 – 1.0° observation angle range, this is not necessarily true for prismatic sheetings. Jerzyk (Reflexite) suggested that NTPEP should petition ASTM to adopt 1.0° OA requirements for all prismatic tables. Warren Ketola suggested that NTPEP take a leadership role by providing 1.0° OA data as informational. Henry Lacinak suggested that industry would benefit from having the data ahead of it becoming a possible ASTM requirement. Matt Hills expressed concern about materials that were not designed to be tested at 1.0° OA

Henry Lacinak indicated that NTPEP’s past practice was that we follow, not lead, ASTM unless a significant number of states request a particular test. Warren Ketola responded that the survey results indicate that a significant number of states are interested. Wendy Ealding suggested the analogy of comparison testing of pavement markings at 15 vs. 30 m geometry. Dave Kuniega (Pavement Marking Panel Chair) said that this was done as a panel decision, and was the subject of a separate report. Ned Schmitt stated that this is being currently done with the wet retro spray

method (ASTM E 2176). There is no additional cost to industry. Henry suggested that Louisiana should collect lab data in 2005 but not publish as an official NTPEP report. This action can be overridden by a consensus of the panel in the future if there is interest in seeing the results published. Karen Byram suggested that this could be considered as a feasibility study. Brook Jerzyk – wanted to know if the testing should be performed at other OA values – to avoid patent conflicts. Henry Lacinak responded that this would need to be considered as a panel matter, to avoid creating excessive workload and also it was not clear what other observation angles should be chosen. Hu stated that Nippon Carbide would like to see the data published. Henry Lacinak raised the fact that this was a contract issue; the 2005 contract only requires 1.0° OA testing for material submitted as Type IX. This would impact any change to be implemented with the 2005 SSM Test Cycle. It was agreed that the decision would be made at the closed (state-only) session.

9. The meeting was adjourned at 5:00 PM

Continuation of meeting – States only session

The meeting was reconvened at 8 AM on May 11, 2005

State members present:

Henry Lacinak – Chair	Louisiana DOTD
Wendy Ealding – Vice Chair	Virginia DOT
Derrick Castle	KYTC
John Mark Clements	KYTC
Philip Lancaster	FDOT
Terry Rawls	SC DOT
John Corcoran	NH DOT
Jim Swisher	Virginia DOT
Scott Thorson	Nevada DOT

Discussion of Industry Concerns

NC daytime color measurements – the last submittal was 2003, will complete in 2006. 2002 submittal will complete in 2005. Derrick Castle suggested we might be able to get a suitable loaner/demo instrument from instrument manufacturer. Henry Lacinak expressed concern that a loaner instrument history could be unknown and its performance would need to be verified. Jim Swisher would prefer to have the panels shipped to VA to read. **Action Item:** Jim to work with industry to identify the panels that would need to be read in VA.

1.0° OA testing - Wendy Ealding suggested testing the 2005 submittal of prismatic. This would just be initial lab data for feasibility. The data would not be published (except for Type IX as required) but it would be available on request by states and manufacturer (own data). For 2006, it was proposed to do 1.0° OA testing – include in contract. **Action Items:** Louisiana to perform 1.0° OA testing on 2005 submittal of prismatic. Ballot change in work plan to routinely test prismatic at 1.0° OA starting with the 2006 submittal.

Data review – per Jim Swisher, each year there are three data bursts (1, 2 and 3 year) in summer, and initial and 6 month in winter. Allow 30 days for review. Problem should subside as retroactive data entry completed. **Action Item:** Jim to notify industry by e-mail, copy Mike

McGough, when data available for review.

DataMine – lack of commentary – is already being addressed. Users Guide is to be developed, Jim suggested that we have a presentation at annual meetings. An alternative for users who cannot travel would be a possible web conference or CD tutorials. Terry Rawls suggested joint Webinar with ATSSA. At JREC meeting ATSSA has already suggested presentation at ATSSA meeting.

Dispute resolution is part of current NTPEP policy. We do not send panels back. We have the ability to use other labs to test panels in dispute (VA, FL, MO, LA, TFHRC).

Florida test deck info – Philip Lancaster presented data comparing daytime color stability of materials tested in Gainesville and the Keys after 2 yrs exposure – see Attachment 10. 3 yr exposure will complete in June. Does show some differences, more change seen on the Keys. The climate in Gainesville is similar to Baton Rouge. Terry Rawls made the observation that signs close to the coast experience more change. **Action Item:** Panel will revisit once 3 year weathering complete. Florida DOT will consider revisiting the concept of hosting a deck. This topic will be discussed further once the 3-year data is available.

Discussion of state comments

Continued participation by AZ and MO. It was confirmed that Oscar Mousavi has moved to another position in ADOT and Jeff Falkner (the chemist who did the testing) has retired from ADOT. Jeff may come back part time this summer to help out. Julie Wieland has taken over the testing at MODOT. Jim Swisher has volunteered to visit ADOT to help the replacement person get familiar with the testing. **Action Items:** Jim Swisher and Mike McGough will follow up with ADOT.

Meeting adjourned at 9:30AM

Respectfully submitted

Wendy Ealding
NTPEP Sign Sheeting Project Panel Vice Chair